

Cut out the deadweight: Nurture bigger, better growth by transferring the burden of taxation from the real productive economy to the economic rent of land

"Investigating how tax structures could best be designed to promote economic growth is a key issue for tax policy making" Organisation for Economic Developmentⁱ

"Cut out that dead wood, and new shoots will grow" BBC Gardening blog

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Executive summary

The current burden of taxation falls on economic activity in the real economy. The resultant deadweight losses impede growth.

There are potential sources of public revenue with less damaging consequences, namely taxes on unproductive economic rent. The principal, most tangible and most taxable form of economic rent is the economic rent of land.

Replacing economically damaging taxes with an economically neutral land value tax (LVT) minimises deadweight losses and promotes growth. A nation should recover as much from taxation on unproductive economic rent as it can, only taxing productive activity as a last resort.

Following the introduction of LVT, a virtuous cycle would establish itself in which expansion of the land value tax base allows progressive elimination of bad taxes.

As well as paying for public services without shrinking the economy, introducing a LVT would redirect investment into economically productive activity, palliate societal and inter-regional inequality, provide an opportunity for rational social and environmental engineering, and enhance UK productivity and competitiveness: high-quality growth.

Deadweight losses

The statement in a 1997 report to the Joint Economic Committee (JEC) of the United States Congress that “All taxes distort behavior and reduce economic efficiencyⁱⁱ” articulates a foundation stone of the economic theory that guides policy-making. “Distorting behaviour” here means interfering with the operation of a free market which would, unfettered, ensure maximum economic efficiency, i.e. optimal production and distribution of limited resources, goods and services. According to the Congressional Budget Office (CBO) which produces “independent analyses of budgetary and economic issues to support the Congressional budget process”:

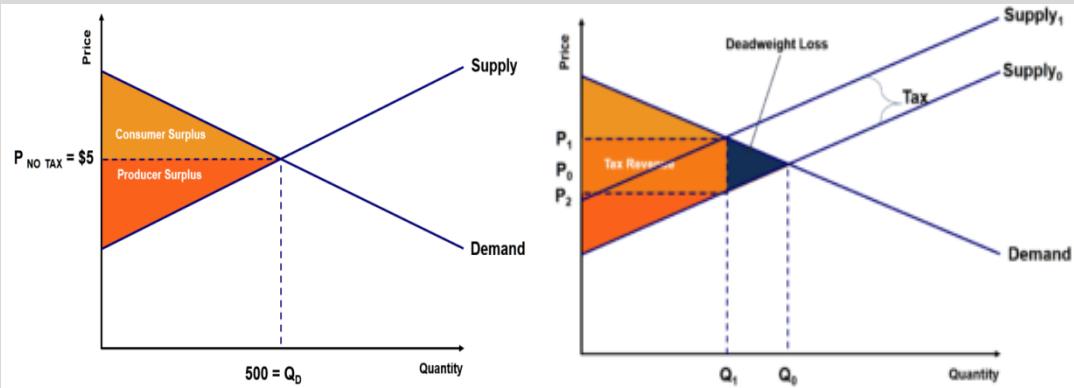
“Taxes change behavior. Consumers buy less of taxed goods and more of untaxed goods. People decide whether and how much to work on the basis of their after-tax wages and thus may choose to work less when income taxes are higher.”ⁱⁱⁱ

This reduction in efficiency or economic destruction is described variously as “the excess burden of taxation” or “deadweight loss”. Some use the term “welfare cost” to reflect the resultant overall reduction in well-being of citizens. **Box 1** shows how economists illustrate this parameter using supply and demand curves: imposition of a new tax distorts behaviour and perturbs the equilibrium of the free market, thereby curtailing production and shrinking the economy. The deadweight losses are the goods or services that are no longer produced or traded as a result of the increase in price caused by the tax. If the situation is one of a tax hike rather than the introduction of an entirely new tax, any revenue to the Treasury from pre-hike taxes on the goods (or jobs) that have vanished is also lost. However, it should be emphasised that this is a theoretical picture incorporating a huge set of diverse variables, many of which are unmeasurable in practice. Despite their potential importance when it comes to formulating fiscal policy, meaningful quantification of deadweight losses is difficult. Deadweight losses are expressed as how much the economy as a whole shrinks as a result of the imposition of a tax, e.g. how much Gross Domestic Product is lost for every pound of Treasury revenue. Various attempts have been made in the US context with disparate findings and above all huge margins of error. One academic study estimated that 44 cents-worth of economic activity is abolished for every dollar of overall revenue^{iv} (with the specific deadweight of income tax in this overall figure being 50 cents per dollar^v). Others come up with higher figures^{vi} including Martin Feldstein, former Chief Economic Advisor to President Ronald Reagan, who puts it at “one dollar per dollar of revenue raised, making the cost of incremental governmental spending more than two dollars for each dollar of government spending.^{vii}” Reviewing the whole issue in 2001, the CBO concluded that:

“Typical estimates of the economic cost of a dollar of tax revenue range from 20 cents to 60 cents over and above the revenue raised.”^{viii}

Based on 2017 figures with US Treasury revenue at \$3.4 trillion for a GDP of \$19.4 trillion (17.5%), this would put taxation-related deadweight losses to the US economy at \$680-2,000 billion per annum, or 3.6-10.5% of GDP. A similar profile in the UK where the tax take (£735 billion) is a higher proportion of GDP (36.0% of £2.04 trillion) would mean deadweight losses of £147-441 billion or 7.2-21.6% of GDP. This simple extrapolation ignores the fact that the relationship between taxation and deadweight losses is not a linear one with higher tax rates carrying disproportionately higher deadweight so absolute losses in the UK and the fraction of GDP destroyed would likely be higher.

Box 1. Deadweight losses



On the left, a classic supply and demand curve for a certain good (the price axis could equally be the price of labour in which case the graph would address jobs rather than goods but the story would be the same). The demand curve describes a population of some 1,000 consumers, some of whom value the good so much that they would pay eight dollars for it and others who would only buy it if it cost three dollars; most people fall between these two extremes. The supply curve describes a population of producers, some willing to produce and sell the good for three dollars and others who would only produce it if they could sell it for eight dollars. In the free market illustrated, these dynamics result in an equilibrium price of five dollars ($P_{NO\ TAX}$ or P_0), a price that 500 consumers are willing to pay. Some of these are particularly happy because they are getting something for less than they would have been prepared to pay for it ("Consumer Surplus") although the others go without the good because it costs more than they think it is worth to them. Similarly, some producers are happy because they are getting a higher price for the good than they would have been prepared to accept ("Producer Surplus") whereas others cannot supply the good at the market price and therefore neither produce nor sell it.

On the right, a tax has been introduced on the good, thereby raising its price by a dollar. The consumer must pay more ($P_0 \rightarrow P_1$) and the producer gets less of the price ($P_0 \rightarrow P_2$). Nobody has changed their mind about what the good is worth but the price hike means that the one-hundred consumers who value the good at between five and six dollars no longer buy it: one hundred fewer units are sold ($Q_0 \rightarrow Q_1$), supply drops relative to demand ($Supply_0 \rightarrow Supply_1$) and some producers close their factory gates. The tax has provided revenue to the government but the numbers of happy consumers and happy producers have both gone down and a black hole has eaten goods that used to be produced, sold and enjoyed. This is the deadweight loss of this tax.

In 2017, a Freedom of Information request to the Office of Budget Responsibility (OBR) concerning the deadweight losses of all UK taxes together and of the main taxes severally, elicited the answer:

"We do not hold the information that you have requested. In producing tax forecasts, we have not needed to produce estimates of deadweight losses."

In a subsequent telephone conversation about the academic estimates mentioned above, the OBR confusingly stated that "We don't work deadweight losses out but they're not as high as that"!

The radical elephant in the room: taxation can be both fair and efficient

Quantitative data available on deadweight losses are not only limited in quantity and quality but also tend to concern taxation across the board and result in broad-brush statements like the one cited above from the JEC, “*All taxes distort behavior and reduce economic efficiency*” (emphasis added). It is indeed true that all of our current taxes incur deadweight losses so, given that “*Taxes are the price we pay for civilised society*¹”, is taxation-induced economic destruction an unavoidable additional price to be paid on top? Although all our current taxes impose deadweight losses, they are not all equally destructive: it is generally accepted that sales taxes and excise duties are the worst followed by income taxes, both personal income taxes and corporate. Property taxes and severance taxes (on the extraction of resources like minerals and petroleum) impose relatively light deadweight losses. And of course some taxes like those on alcohol, tobacco, pollution and petroleum or congestion charges are explicitly intended to distort behaviour in order to promote socially desirable ends. In terms of specific effects on economic growth, the Organisation for Economic Development (OECD) proposes a different rankingⁱ:

“Corporate taxes are found to be most harmful for growth, followed by personal income taxes, and then consumption taxes.”

In the CBO “Budget Options” report quoted above^{vii}, the discussion addresses a form of taxation that has next-to-no deadweight losses:

“The most efficient tax from an economist’s viewpoint is a head tax—a specific levy on every individual, regardless of his or her well-being. Because liability under such a tax does not depend at all on behavior, the only distortion comes from the revenue collection itself. Unfortunately, maximizing efficiency can mean imposing taxes that many people feel are unfair ... Most would view such a head tax as inherently unfair. Rather than focusing only on maximizing efficiency, the country faces trade-offs between doing what is best for the economy and what is fair.”

Too right that people tend to see a Poll Tax as unfair: when King Richard II tried to impose one, he triggered the Peasants’ Revolt and when Margaret Thatcher tried it, she lost her job. But is it true that “*doing what is best for the economy and what is fair*” inevitably entails a trade-off? What if there were a fair tax that minimised deadweight losses?

From the graphs in **Box 1**, it can be seen that the magnitude of deadweight losses is conditioned by the slopes of the demand and supply curves which reflect what economists refer to as elasticity, namely the rate at which either parameter changes with a change in price: if a small change in price has a large impact on either the quantity consumers want to buy (elastic demand) or the quantity producers want to sell (elastic supply), the slope of the curve will be shallow and the deadweight loss will be high. In contrast, the lower the elasticity of demand or supply, the steeper the corresponding curve and the lower the deadweight loss. Imagine a good with a completely fixed, perfectly inelastic supply: there is no more of it if the price goes up and no less if the price goes down so its supply curve is perfectly vertical (Figure 1).

¹ A quotation from US Supreme Court Justice Oliver Wendell Holmes Jr which is inscribed above the entrance to the headquarters of the Internal Revenue Service

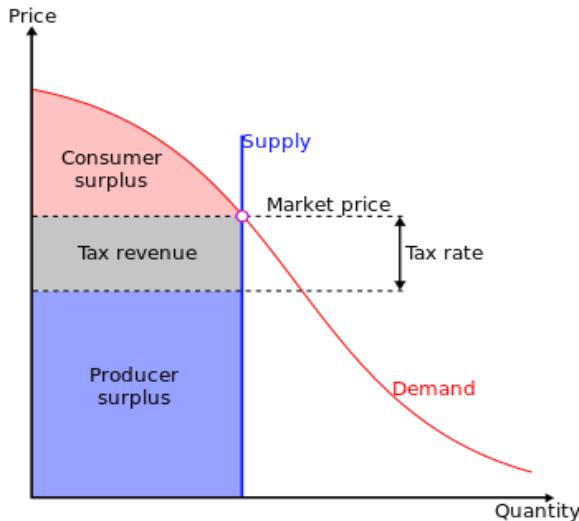


Figure 1. Deadweight losses for a fixed-supply good

No deadweight losses at all! A perfectly efficient tax! According to the CBO, either no such resource exists or, if it does, taxing it would be unfair. But there is a resource with perfectly inelastic supply and it is a unique one in many other respects too. Mark Twain said it:

"Buy land, they're not making it any more."

Land is the ultimate fixed-supply resource and a uniquely important and valuable one at that. But the taxation system of the UK (as well as those of most other countries) largely sidelines it: property taxes (Council Tax and Business Rates) contain some component on land value but account for only 9% of Treasury revenue.

The glibness of the misleading statement that "*The most efficient tax from an economist's viewpoint is a head tax*" in the CBO report typifies the endeavour to hide the elephant in the room and suppress discussion of an idea that is inconvenient to a wealthy, landowning vested-interest group who, though small in number, wield disproportionate power^{ix}. Collegial consensus is extremely rare in the world of economics but most economists—as politically diverse as David Ricardo², Henry George³, Milton Friedman⁴ and Joseph Stiglitz⁵—broadly agree with Adam Smith on two things: that taxes on unearned income and economic rent (see **Box 2**) are the most economically efficient; and that the principal, most obvious, most tangible and therefore most taxable form of economic rent is the economic rent of land. Smith compares taxes on property ("the rent of houses") and land ("ground rents"):

"Ground-rents are a still more proper subject of taxation than the rent of houses ... Whether the tax was to be advanced by the inhabitant, or by the owner of the ground, would be of little importance. The more the inhabitant was obliged to pay for the tax, the less he would incline to pay for the ground; so that the final payment of the tax would fall altogether upon the owner of the ground-rent."

The CBO stance implies that a trade-off is inevitable between the economic efficiency and fairness of any tax. So, if taxing land is so economically efficient, it must be deeply unfair. How else can one explain why it is so little used anywhere to fund government? Is this true? Adam Smith makes much of the point that any tax on land will be paid—directly or indirectly—by the landowner. This is illustrated in the graph in Figure 1 by the entire burden of taxation coming out of Producer Surplus rather than any coming out of Consumer Surplus (unlike the elastic situation in **Box 1**). While taxing land may be “unfair” to landowners, this runs counter to accepted use of the word in the context of

² David Ricardo: "A land-tax, levied in proportion to the rent of land ... will not in any way affect the price of raw produce, but will fall wholly on the landlords" In: On the Principles of Political Economy and Taxation

³ Henry George: "The tax upon land values is the most just and equal of all taxes" In: Progress & Poverty [1879]

⁴ An Interview with Milton Friedman: "the least bad tax is the property tax on the unimproved value of land, the Henry George argument of many, many years ago" Human Events 38[46]

⁵ Joseph Stiglitz: "Not only was Henry George correct that a tax on land is non-distortionary, but in an equilibrium society ... tax on land raises just enough revenue to finance the (optimally chosen) level of government expenditure" In: The Economics of Public Services, Feldstein & Inman, eds., London: Macmillan. 1977

taxation: rich people tend to own more land than poor people so, as well as being economically efficient, a land value tax (LVT, **Box 3**) is fair. No trade-off needed!

Box 2. Economic rent of land

In the vernacular, “rent” means a payment for the temporary use of something like a car or accommodation. Economic rent has a different definition:

“Any payment to an owner or factor of production in excess of the costs needed to bring that factor into production.”

Part of the rent that a tenant pays to a landlord is to compensate for the landlord’s capital investment, including any improvements made to the property, as well as wear and tear on the building and maintenance costs. None of this is economic rent and these costs will be similar for identical properties in Newcastle and Mayfair. However, the rents for these two properties will be very different because of the differential values of the two plots of land due to where they are. This reflects the economic rent of land. The location value of a plot of residential, commercial or agricultural land is conditioned by its proximity to local jobs and services, both public (schools, hospitals, utilities, transport systems, parks, ...) and private (broadband, distribution networks, yoga classes, ...), as well as national services (law and order, defence, the judicial system that defends landowners’ property rights, ...) and natural attributes (fertility, beauty, ...). None of these are due to the landowner’s input, as Winston Churchill put it:

“Roads are made, streets are made, services are improved, electric light turns night into day, water is brought from reservoirs a hundred miles off in the mountains—and all the while the landlord sits still. Every one of those improvements is effected by the labour and cost of other people and the taxpayers. To not one of those improvements does the land monopolist, as a land monopolist, contribute, and yet by every one of them the value of his land is enhanced. He renders no service to the community, he contributes nothing to the general welfare, he contributes nothing to the process from which his own enrichment is derived.”

Economic rent is unearned income and therefore provides a tax base that does not penalise economically productive activity; that of land is the easiest form of economic rent to value and tax.

The 2008 OECD paper on Taxation and Economic Growth which takes into account considerations of *“equity, simplicity and revenue raising”* as well as efficiency and economic growth carries on from the statement quoted above:

“Recurrent taxes on immovable property appear to have the least impact”

Box 3. Land Value Tax

A land value tax is an annual levy on the unimproved value of land, ignoring any buildings or amenities added to it by the landowner's work and investment, past and present. Rather than being a tax, this is more like asking landowners for a payment for benefits received – a share of the unearned income they get from their asset without them having had to do anything themselves. LVT is doubly fair: those with land wealth who can most afford to pay will pay the most; and those who benefit the most from public sector investment (through rising land values and rents), will contribute the most towards its cost.

The godfather of land value taxation was 19th century American political economist Henry George:

"The tax upon land values is, therefore, the most just and equal of all taxes. It falls only upon those who receive from society a peculiar and valuable benefit, and upon them in proportion to the benefit they receive. It is the taking by the community, for the use of the community, of that value which is the creation of the community."

This type of tax is sometimes called "ground rent" or "site-value rating". Given its character of "payment for benefits received", an eminently suitable moniker might be "Community Charge" but that one has baggage.

How much?

To pay for public services, a nation should recover as much revenue from economically efficient taxes as it can, only taxing economically productive activities and resources (work, trade, consumption, savings, returns from savings, capital, etc.) as a last resort. This will reduce the deadweight losses of taxation and thereby promote economic growth. But by how much? Empirical data are scarce because such fiscal reforms have been implemented so rarely although the scant evidence available tends to support the theory. For example, when a LVT was introduced in Denmark, key economic indicators rapidly improved largely because investors switched from real estate to real enterprise^{xii}. When the tax was repealed by an incoming administration (elected after a campaign with massive funding from landowners), all the improvements reversed and, among other things, land prices sky-rocketed. Other relevant experiences of funding public sector expenditure out of levies on land in Hong Kong, Taiwan, Singapore and Estonia show disparate outcomes in very different situations although the picture is generally positive^{xiii}.

As discussed above, quantifying the deadweight losses of any tax or in any economy is difficult and the results are unreliable. It is still more difficult to predict even the direct effects of such a wholesale shift in fiscal policy as the one proposed here, let alone any secondary, knock-on effects. Nevertheless, attempts have been made. Using a widely-used albeit controversial^{xiv} macroeconomic methodology called the Aggregate Production Function, Nicolaus Tideman, former Senior Staff Economist on the US President's Council of Economic Advisors, modelled overall output in the G7 economies as a function of classical factors of production, namely land, labour and capital, taking into account cofactors like technology ("Total Factor Productivity") and the impact of taxation. Using published 1993 data (including figures for output, share of output going to wages, tax rates, tax revenues and savings), he compared actual output under the current fiscal regime with potential

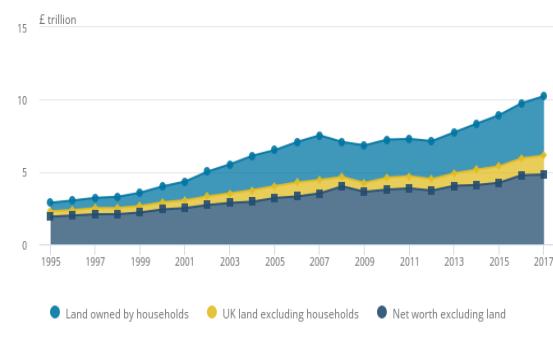
output under a hypothetical regime in which, insofar as possible, taxes have been shifted off labour and capital and onto existing economic rents^{xiv}. In the UK, Tideman estimates that output under the 1993 tax regime was just 55% of what it would have been if, without changing the absolute tax take, as much of the burden of taxation as possible had been shifted onto economic rents, the most significant of which being that of land. *Per capita* Net Domestic Product (GDP minus the depreciation of the country's capital goods) would have been £27,000 instead of £15,000. The economic theory and methodology are both controversial, the assumptions in the model are enormous and any such abrupt shift is technically unrealistic as well as politically unthinkable. However, even if the results were out by an order of magnitude, they would be striking.

Now

Since this modelling exercise in 1993, things have changed. Between 1995 and 2017, the value of land in the UK rose 5.6-fold, compared with a 2.5-fold increase in the net worth of all other assets (essentially buildings on the land, bank deposits, stocks and pensions). By 2017, land was worth £5.4 trillion^{xv}, accounting for more than a half of overall UK net worth, compared with just a third in 1995. Most of those who owned their own home—or more accurately, land—over this period “made” more money from their asset than they did in wages^{xvi}, a concrete illustration of how the system favours unearned income over earned income.

Figure 2: Value of land within UK net worth, 1995 to 2017

Coverage: UK



Source: Office for National Statistics

Therefore, the tax base for a LVT is far higher than it was in 1993 and land accounts for a higher fraction of net national wealth. Assuming that rental value corresponds to 5% of capital value, the base for an annual LVT would now be some £270 billion; this compares with tax bases of the order of £1 trillion for Income Tax and National Insurance Contributions (which respectively bring in about 25% and 18% of Treasury revenue) and £600 billion for VAT (17%). However, whereas the entire £270 billion of economic rent could in theory be levied without adverse economic consequences, deadweight losses for taxes on income and consumption rise exponentially with the tax rate, thereby limiting the real base for such taxes. A tax on the value of UK land could bring in substantial revenue, making it possible to significantly reduce or abolish current taxes that impede growth.

The opposite of deadweight losses: a radical plan to force a step change in the quantity and quality of economic growth

When the modelling is extended out through five years after the supposed abrupt shift from the current fiscal system, increases in economic growth are sustained with year-on-year incremental improvement. This is largely due to two land-specific factors that are justifiably built into the model. First, expansion of the deadweight loss-free tax base, namely land value: as taxes are removed from labour and capital and the economy grows, people steadily work, save and invest more which drives up revenue from the land and therefore further drives up its value. This raises Treasury revenue from this source so that more of the burden of taxation can be shifted off economically harmful taxes, thereby establishing a virtuous cycle which might ultimately allow the abolition of all

destructive taxes. Second, the overall contribution of land to the real economy rises because its speculative value is abolished. Under the current tax regime, there is no penalty for leaving desirable land undeveloped or underexploited; the evidence of this is visible all around us from unoccupied mansions in the most desirable neighbourhoods of our cities to the 600,000 plots of land with planning permission that currently sit undeveloped across the country^{xvii}. If all this land's potential value were taxed, it would soon find its way into the hands of people whose interest is to optimise its use. Therefore a judiciously implemented tax on land would enhance the use of one of the key factors of production. Judicious implementation would include measures to ensure that land is sensibly valued on an optimum-use rather than present-use basis. How a switch to land value taxation could enhance the quality as well as the quantity of economic growth largely depends on reform of our broken planning system to create an instrument for benign social engineering (mixed housing, joined-together development, rational place-making, ...) and environmental protection (parks, wilderness, sustainable farming practices, ...); however these aspects are beyond the scope of this summary.

At the same time as taxing land would divert investment away from that sector, removing taxes on capital and returns on capital would redirect it into the productive economy. This would tend to enhance UK productivity, a goal that has proved frustratingly elusive.

Finally, shifting the burden of taxation off production and consumption would make goods and services cheaper and therefore more competitive on international markets. This would improve the country's foreign account, another longstanding but elusive goal.

Conclusion

All current UK taxes have deadweight losses. Although quantification is difficult, every pound collected to pay for public services shrinks the economy with some believing that as much as £500 billion may be destroyed every year, i.e. more than a quarter of GDP^{xviii}. Theory says that, on the one hand taxes on unearned income and economic rent have lower deadweight losses than taxes on economically productive activities like work, trade, investment and enterprise, and on the other that a tax on a resource with a fixed supply will have no deadweight loss at all. A tax on the value of land ticks all these boxes so replacing any of our current economically destructive taxes with a LVT would boost the economy by cutting down deadweight losses. Above and beyond this indirect effect, a LVT would *per se* have direct positive effects on economic growth: firstly by optimising use of the key factor of economic production that is land, and secondly, by repairing an extremely dysfunctional land market which has inflated land prices and encouraged massive speculation that not only creates perverse incentives to leave useful land undeveloped and therefore unproductive but also diverts investment away from the productive economy.

Evidence abounds that inequality is an independent factor that correlates negatively with economic growth^{xix, xx}. A LVT would mitigate inequality because rich people own more land than poor people. Moreover, it is fair because those who benefit most from public sector investment-driven rises in land value would contribute most towards paying for said investment, in proportionate measure. In addition to palliating societal inequality, a LVT would also smooth out geographical inequality by attracting economic activity to parts of the country where land values are low, bringing jobs and dynamism to where they are most lacking. All this means that benefit from the nation's most important asset will be more equally shared between its people as will be the economic growth driven by this fiscal reform—high quality growth. Finally, introduction of a LVT would impose repair of our broken planning system to make it a powerful instrument for rational, sustainable development, thereby improving quality of life for all citizens as well as facilitating the engineering of positive environmental outcomes.

Any switch of the burden of taxation off economically productive activity onto the economic rent of land would drive bigger and better economic growth. This growth would be sustained by an open-ended virtuous cycle of progressive expansion of the land value tax base allowing ongoing elimination of economically destructive taxes and perpetuation of all the above-mentioned positive effects.

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